

VALARY LIM

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EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE | Bsc. Business Analytics (Hons) and BA Economics Aug 2018 - May 2022 (Expected)

- School of Computing & University Scholars Programme (USP), Financial Analytics Specialisation
- Cumulative GPA: 4.83/5.00 (Expected Honours with Highest Distinction)
- **Awards:** NUS Global Merit Scholar, Dean's List in Fall 2019 and Spring 2020
- **Coursework:** Fraud Analytics, Risk Analytics, Machine Learning, Regression Analysis

TECHNICAL SKILLS

Languages and Frameworks | Python, R, Java, MySQL, JavaScript, Vue.js, React-Native
Statistical Tools/Packages | Excel; [Python] Pandas, Geopandas, Scikit-Learn, Statsmodels; [R] Tidyverse, Caret, etc.
Data Visualisation | Tableau, Microsoft PowerBI, Python Dash, NetworkX, Matplotlib
Data Science | Regression, Time Series Forecasting, Simulation, Prediction & Classification, Image Processing, Optical Character Recognition (OCR), Natural Language Processing (NLP), Unsupervised Learning
Others | Git (Version Control), Database Management & Querying, Data Scraping, Web Development

WORK EXPERIENCE

WORLDQUANT | Quantitative Research Intern Dec 2019, Aug 2020 – Present

- Automate alpha design framework to generate multiple signals, and visualise and evaluate alpha signal performance
- Collaborate with Quantitative Researchers and senior Portfolio Managers to generate signals to forecast movements of worldwide financial markets from news data and experiment with ideas from academic finance literature in Python and C++

GIC | Data Science Intern May 2020 – July 2020

- Proposed and estimated a simultaneous equation model in Python to forecast future real rental growth for the UK office market and benchmarked model against standard time series models (random walk and autoregressive)
- Independently developed an algorithm based on a synthesis of architecture and data science academic literature to extract information from floorplan images, **increasing sample size by three fold and decreasing model's percentage error by 5%**
- Created a valuation model to predict rental prices per square foot of estates using information extracted from floor plans

NATIONAL UNIVERSITY OF SINGAPORE | Teaching Assistant Aug 2019 – May 2020

- Conducted tutorial sessions for classes of 12-25 students, graded assignments and practical examinations, and provided consultations for **CS1010S Programming Methodology I** (Python) and **CS2040 Data Structures and Algorithms** (Java)
- Achieved a **teaching score of 4.6/5.0**, higher than department and faculty average of 4.1, and 8 teaching award nominations

IRAS | Data Analytics Intern Dec 2018, May 2019 – Aug 2019

- Built a deep learning text classifier using Tensorflow and Keras to categorise and direct emails to relevant tax officers
- Constructed a Python web scraper to automatically retrieve geographical coordinates of malls for real estate modelling
- Coordinated with external vendors to research, test and evaluate various automated machine learning tools and packages
- Designed 3 customised and interactive dashboards in PowerBI to optimise performance checking for team managers

PROJECTS

VISUAL ML | github.com/valarylim/visualml | <https://visualml.herokuapp.com/> May 2020

- Visual ML is an individual passion project to facilitate greater understanding of classification models by simulating datasets and visualising various model performances on an interactive dashboard

VUEPLAN | github.com/valarylim/vueplan | vueplan.firebaseio.com/ Jan 2020 – Apr 2020

- Led a team of 5 to develop VuePlan, a centralised academic planning system for NUS students, on Vue.js and Firebase
- Constructed the Academic Planner feature, inclusive of a drag-and-drop interface and module prerequisites checker
- Visualised module popularity on an interactive dashboard for Module Information feature using Chart.js
- Designed and implemented user interface for VuePlan based on user interaction and feedback

ALPACASH | github.com/valarylim/alpacash May 2019 – Aug 2019

- Alpacash is a gamified financial tracker built on React-Native and Firebase, aiming to engage users to budget and save more
- Engineered the Budget and Finance Statistics segments consisting over 20,000 lines of code
- Attained **Apollo 11 (highest) achievement** under NUS Orbital, a 1st year summer self-directed software development course

EXTRACURRICULAR AND LEADERSHIP

USP PEER MENTORSHIP PROGRAMME | Peer Mentor Aug 2019 – Present

- Organise mentoring sessions for Business Analytics freshmen to provide advice and smoothen transition into university

USP FRESHMEN ORIENTATION PROGRAMME | Finance Director Dec 2018 – Sep 2019

- Led a group of 6 committee members to oversee expenditure of 5 events for the Freshmen Orientation Programme